



Docket No. RSW920010045US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: Jeffrey Scott Chase and Ronald P. Doyle

APPLICATION NO. 09/894,016

FILED: June 28, 2001

Examiner: A. Boutah

CASE NO. RSW920010045US1

Group Art Unit: 2143

TITLE: METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT
FOR HIERARCHICAL LOAD BALANCING

CERTIFICATE OF MAILING

I hereby certify that this correspondence, along with any paper indicated as being enclosed, are being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: MAIL STOP AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 28, 2006.

September 28, 2006
Date


Barbara G. Makariou

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

In response to the final Office Action of June 28, 2006 regarding the above-identified application, Applicants hereby request review of the final rejection. No Amendments are being filed with this Request.

This Request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the attached sheets.

REASONS FOR REQUEST

Applicants have filed, concurrently with this Request, a Notice of Appeal in the above-identified application. Applicants further request a pre-appeal review of the Examiner's rejection of the above-identified application as Applicants believe the Examiner has failed to identify the presence of essential elements required to establish a *prima facie* rejection.

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

MPEP 2143

The Examiner Has Not Established a *Prima Facie* Case of Obviousness

As outlined in the Reply filed April 10, 2006, differences between the present claimed invention and the prior art of record have been discussed extensively. However, Applicants believe that the Examiner has failed to meet all necessary requirements for making a *prima facie* obviousness rejection.

The present claimed invention focuses on improving load balancing in a server/client environment by utilizing a cache/hashing switch (CHS) coupled between clients and servers. Topographically, the present claimed invention places the hashing switch between the clients and the servers, and places the cache between the hashing switch and the clients. By utilizing this configuration, any request for content sent by a client is first intercepted by the cache. The cache examines the request to determine if the content is cached locally, and only when the content is not cached is the request forwarded to the hashing switch for directing to the appropriate server. Specifically, claim 1 recites:

at least one caching/hashing switch (CHS) coupled between clients and servers in said client/server environment, said CHS storing previously requested objects, said CHS comprising:

- a hashing switch coupled to said servers; and
- a front end cache coupled between said clients and said hashing switch;

wherein object requests for objects stored in said CHS are satisfied immediately from said CHS.

Each additional independent claim (Claims 7, 8 and 9) mentions a form of these limitations. This configuration is neither taught nor suggested by the prior art of record, specifically the Applicants admitted prior art (AAPA), Colby and/or Cieslak, taken alone or in combination.

The Examiner is essentially arguing that the mere existence of hashing switches and the mere existence of caches, both of which are acknowledged as being known, and the teaching of the content-aware flow switch of Colby, makes it obvious to combine them, and that such combination would achieve the present invention. This piecemeal approach is a clear application of hindsight; nothing in Colby even remotely suggests the placing of a front-end cache in front of a hashing switch, and immediately serving objects from the cache back to the client when they are stored in the cache. The Examiner has instead gone against the directive from the Federal Circuit in *In re Fritch* which states "[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious...." 977 F.2d 1260 (Fed.Cir. 1992).

Nothing in the references cited by the Examiner, nor in the AAPA, suggests the present claimed invention, where client requests arrive at the cache first and, if a request is available to be served from the cache (because it has been requested previously and is stored in the cache), it is served immediately

back to the client without the need for any switching to occur. In the Final Office Action issued June 28, 2006, the Examiner asserts that Colby teaches a Content-Aware Flow Switch (CFS), which further includes a Content Server Database (CSD) for identifying whether the requested content is at locality before performing switching function, e.g., redirecting, the request to a remote. Examiner additionally asserts that the functionality of the CSD is equivalent to immediately serving the client with the requested content.

Applicants respectfully disagree with Examiner's interpretation of Colby. Colby specifically defines the CSD as "containing information about content flow characteristics, content locality, and the location of and the load on servers" (column 6, lines 42-44). Nowhere in Colby does it suggest that the CSD functions as a cache for storing requested content, nor does Colby disclose or reasonably suggest providing content to a requesting client directly from the CSD. Column 7, lines 20-52 illustrate an example of how the CSD handles a content request. Generally, the CSD examines its records of servers and the content each server has stored therein, and generates a listing of available servers that contain the requested content for delivery to a switching element. The switching element will use the list of servers to connect the requesting client with an available server. However, no mention is made in Colby of utilizing a cache between a client and a hashing switch, and providing requested content from the cache if the content is stored locally at the cache.

The Examiner has failed to show the necessary suggestion in the prior art to modify the teachings to achieved the present claimed invention. Even if the teachings and suggestions of the cited references

were combined, they still would not result in the claimed invention, since there would never be a configuration where the cache is situated between the client and the hashing switch.

Each of the pending claims specifically recites the novel and non-obvious arrangement set forth above. None of the cited prior art teach these novel features, and none of the cited prior art contains any suggestion of such a combination. Without such a suggestion, it is inappropriate to reject the claims as being obvious based on the cited prior art.

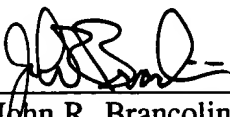
Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited. The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 09-0461.

Respectfully submitted,

September 28, 2006

Date



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